

The wind modification is applied only to the vents which lead to the exterior. Pressure interior to a structure is calculated simply as a lapse rate based on the NOAA tables. For the exterior, the nominal pressure is modified by:

$$\delta(p) = C_w \rho V^2 \quad \text{where} \quad V = V_w \left( \frac{H_i}{H_w} \right)^{P_w} \quad (1)$$

This modification is applied to the vents which lead to the exterior ambient. The pressure change calculated above is modified by the wind coefficient for each vent. This coefficient, which can vary from -1.0 to +1.0, nominally from -0.8 to +0.8, determines whether the vent is facing away from or into the wind (into increases the pressure, so the coefficient is positive). The pressure change is multiplied by the vent wind coefficient and added to the external ambient for each vent which is connected to the outside.